

**Amendment and Response**

Serial No.: 09/834,110

Confirmation No.: 5306

Filed: April 12, 2001

**For: TREATMENT OF DISORDERS BY IMPLANTING STEM CELLS AND/OR PROGENY THEREOF INTO GASTROINTESTINAL ORGANS**

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**Amendments to the Claims**

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

**Listing of Claims**1-24. **(Canceled)**

25. **(Currently Amended)** The method of claim [[21]] 35 wherein the implanted cells repopulate neurons.

26. **(Currently Amended)** The method of claim [[21]] 35 wherein the subject suffers from a disorder of the enteric nervous system.

27.-30. **(Canceled)**

31. **(Currently Amended)** The method of claim [[21]] 35 wherein the gastrointestinal alimentary tract is the mouth, the esophagus, the stomach, or the bowels.

32. **(Currently Amended)** The method of claim [[21]] 35 wherein implanting cells into a gastrointestinal alimentary tract of a subject comprises administering the cells by local injection [[locally]].

33. **(Currently Amended)** The method of claim [[32]] 41 wherein administering cells locally comprises injecting the implanting cells into a wall of the gastrointestinal alimentary tract of a subject comprises administering the cells by local injection.

34. **(Canceled)**

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35. **(Currently Amended)** A method of providing a neurotransmitter nitric oxide (NO) within the gastrointestinal alimentary tract of a subject suffering from a gastrointestinal disorder associated with lower levels of NO comprising implanting isolated embryonic neural stem cells, progeny thereof, or combinations thereof directly into the gastrointestinal alimentary tract of the subject, wherein the implanted embryonic neural stem cells produce NO suffering from a gastrointestinal disorder.
36. **(Canceled)**
37. **(Currently Amended)** The method of claim 35 wherein the neurotransmitter is implanted neural stem cells further produce substance P.
38. **(Canceled)**
39. **(Currently Amended)** The method of claim [[38]] 35 wherein the neural stem cells are implanted into the pylorus.
40. **(Currently Amended)** The method of claim [[38]] 35 wherein the neural stem cells are implanted into the duodenum.
41. **(Currently Amended)** A method of treating a disorder of the enteric nervous system in a subject suffering from an enteric nervous disorder associated with lower levels of NO comprising implanting isolated embryonic neural stem cells, progeny thereof, or combinations thereof directly into the gastrointestinal alimentary tract of the subject, wherein the implanted embryonic neural stem cells produce NO suffering from an enteric nervous disorder.

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42. (Cancelled)

43. (Previously Presented) The method of claim 41 wherein the cells are implanted into the pylorus.

44. (Currently Amended) The method of claim [[38]] 35 wherein said gastrointestinal disorder of the enteric nervous system is selected from the group consisting of achalasia, Hirschsprung's disease, congenital pyloric stenosis, reflux disease, irritable bowel syndrome, and intestinal pseudo-obstruction.

45. (Previously presented) The method of claim 41 wherein said disorder of the enteric nervous system is selected from the group consisting of achalasia, Hirschsprung's disease, congenital pyloric stenosis, reflux disease, irritable bowel syndrome, and intestinal pseudo-obstruction.

46. (New) The method of claim 41 wherein the implanted cells repopulate neurons.

47. (New) The method of claim 41 wherein the gastrointestinal alimentary tract is the mouth, the esophagus, the stomach, or the bowels.

48. (New) The method of claim 41 wherein the implanted neural stem cells further produce substance P.

49. (New) The method of claim 41 wherein the neural stem cells are implanted into the duodenum.